AMENDMENTS TO THE CLAIMS

The following listing of claims will replace all prior versions, and listing of claims in the application:

LISTING OF CLAIMS:

Claim 1 (currently amended) A method of detecting a scene change in a digital video sequence having a plurality of frames, the method comprising:

calculating a first color weighted root mean squared (RMS) value for a first frame relative to a second frame and the second frame relative to a third frame;

calculating a first mean absolute difference (MAD) value for the first frame relative to the second frame;

determining if the first color weighted RMS value meets a first criterion;

determining if the first MAD value meets a second criterion; and

designating the second frame as a scene change frame at least partly in response to determining that both the first color weighted RMS value meets the first criterion and the first MAD value meets the second criterion.

Claim 2 (Cancelled).

Claim 3 (original) The method as defined in claim 1, further comprising storing an

I-frame designation in a file for the second frame and storing a P-frame designation for a third frame in the file.

Claim 4 (Currently amended) The method as defined in claim 1, wherein the first color weighted RMS value is based at least in part on pixel luminance values and ~~chrominance~~ chromaticity-blue and chromaticity-red component values of the first and second frames.

Claim 5 (currently amended) ~~The~~ A method ~~as defined in claim 1, wherein~~ of detecting a scene change in a digital video sequence having a plurality of frames, the method comprising:

calculating a first root mean squared (RMS) value for a first frame relative to a second frame and the second frame relative to a third frame, the first RMS value ~~is~~ being defined as 30 RMS (F i , F k) = + + 1 w .times. h x = 1 w y = 1 h Y i (x , y) - Y k (x , y) 2 + 2 + + 1 w .times. h x = 1 w / 2 y = 1 h / 2 U i (x , y) - U k (x , y) 2 + 2 + + 1 w .times. h x = 1 w / 2 y = 1 h / 2 V i (x , y) - V k (x , y) 2

where F.sub.i is the first frame, F.sub.k is the second frame, F(x, y) denotes the (x, y).sup.th pixel in frame F, w is a frame width and h is a frame height, Y(x, y) corresponds to a pixel luminance value, and U(x, y) and V(x, y) corresponds to

chromaticity components, and, and are weighting coefficients for luminosity, chromaticity-blue and chromaticity-red components correspondingly; [[.]]

calculating a first mean absolute difference (MAD) value for the first frame relative to the second frame;

determining if the first RMS value meets a first criterion;

determining if the first MAD value meets a second criterion; and

designating the second frame as a scene change frame at least partly in response to determining that both the first RMS value meets the first criterion and the first MAD value meets the second criterion.

Claim 6 (original) The method as defined in claim 5, wherein = = =1.

Claim 7 (currently amended) The method as defined in claim [[1]] 5, wherein the first MAD value is calculated using luminance value and excluding chromaticity components.

Claim 8 (currently amended) The method as defined in claim [[1]] 5, wherein the first criterion is a first threshold and the second criterion is a second threshold.

Claim 9 (original) A method of detecting a scene change in a digital video sequence, the method comprising:

calculating a second temporal derivative RMS value for a first frame relative to a second frame and the second frame relative to a third frame; and

based at least in part on the second derivative value, determining that the second frame is a scene change frame.

Claim 10 (original) The method as defined in claim 9, wherein the determination that the second frame is a scene change frame is further based upon a mean absolute difference value calculated using at least luminosity information for the first and the second frames.

Claim 11 (original) The method as defined in claim 9, wherein the determination that the second frame is a scene change frame is further based upon both an RMS value meeting a first criterion and the second temporal derivative RMS value meeting a second criterion.

Claim 12 (original) The method as defined in claim 9, wherein the second temporal derivative RMS value is greater than or equal to a first threshold.

Claim 13 (currently amended) ~~The~~ A method ~~as defined in claim 9, wherein~~ of detecting a scene change in a digital video sequence, the method comprising:

calculating a second temporal derivative RMS value for a first frame relative to a second frame and the second frame relative to a third frame; and

based at least in part on the second derivative value, determining that the second frame is designated as a scene change frame when the second temporal derivative RMS value is negative and has a greater absolute value than a first value.

Claim 14 (currently amended) ~~The~~ A method ~~as defined in claim 9, further comprising~~ of detecting a scene change in a digital video sequence, the method comprising:

calculating a first RMS value, wherein the first RMS value is color weighted;

calculating a second temporal derivative RMS value ~~and the second temporal derivative RMS value is~~ based only on temporal components for a first frame relative to a second frame and the second frame relative to a third frame; and

based at least in part on the second derivative value, determining that the second frame is a scene change frame.

Claim 15 (original) ~~The~~ A method ~~as defined in claim 9, wherein~~ of detecting a scene change in a digital video sequence, the method comprising:

calculating a second temporal derivative RMS value for a first frame relative to a second frame and the second frame relative to a third frame, the second temporal derivative RMS value ~~is~~ being equal to (RMS(F.sub.i-1, F.sub.i)-2RMS(F.sub.i, F.sub.i+1)+RMS(F.sub.i+1, F.sub.I+2)), where F.sub.i-1 is the first frame, F.sub.i is the second frame, F.sub.i+1 is a third frame, and F.sub.i+2 is a fourth frame; and [[.]]

based at least in part on the second derivative value, determining that the second frame is a scene change frame.

Claims 16-23 (cancelled)

Claim 24 (currently amended) A method of determining which portions of a video sequence are to be intracoded, the method comprising:

calculating a first root mean squared (RMS) value for a first portion of the video sequence;

calculating a first mean absolute difference (MAD) value for the first portion of the video sequence; determining if the first RMS value meets a first criterion;

determining if the first MAD value meets a second criterion;

determining if the first MAD value ~~meets a third criterion~~ is a local maximum; and

causing an intracoding operation to be performed at least partly in response to at least two of the first, second and third criteria being met.

Claim 25 (cancelled).

Claim 26 (original) The method as defined in claim 24, wherein the first portion of the video sequence includes a first frame.

Claim 27 (original) The method as defined in claim 24, wherein the first portion of the video sequence includes a first GOV.

Claim 28 (original) The method as defined in claim 24, wherein the first portion of the video sequence includes a first GOP.

Claims 29-30 (cancelled)